per cent. Fe against which 1 per cent. Si is burnt off, as a net result a gain of 1 per cent. . . . (68),

2. For thet Phosphorus.

Should the elimination of the phosphorus take place exclusively by means of iron peroxide with complete utilisation of the oxygen content of the latter, so the formula

6P+5Fe203=3P205+10Fe

must be employed for estimation of the oxygen required,

5 X160 according to which 1 per cent. Px ,..x€M -=4*30 per cent.

O Xol

Fe203 is required . - . (69).

Since the hypothetical phosphate slag contains no iron protoxide, an extra addition of iron peroxide is not necessary for the slag.

The change in weight which will be caused by the elimination of 1 per cent. P by means of iron peroxide is calculable as follows:—

1 per cent. P is the cause of the reduction of ~—^r-^3'00

D X Ol

per cent Fe from FesOs, and by 1*0 per cent. P the charge is diminished; in consequence the net result is a gain in charge weight of 2-00 per cent. . . . (70),

3. For the Manganese*

The iron peroxide requirement for 1 per cent. Mn is calculable in like manner from the formula

8Mn+Fea08=8MnO+2Pe as being ~=0*97

loo

per cent. . . . (71).

Here 1 per cent. Mn separates out from the charge, against

2 X 56

which there is reduced ^—^=0*68 per cent. Fe: thus from

oX 55

the removal of 1 per cent. Mn by the agency of Fe203 a loss of charge of 0*32 per cent, results „ » . (72). B.S.

Q